In The Claims:

1. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(~~1.1~~a) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(~~1.2~~b) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection function H(p), wherein the selection function is a linear combination of the data collision ratio R(i)~~s~~, p being from 1 through Q and denoting a pth partition sequence;

(~~1.3~~c) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels; and

(~~1.4~~d) responsive to a control signal, selecting one of the first sequence and the second sequence as the hopping sequence.

2. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(~~2.1~~a) responsive to a RF signal, detecting an interference event within the RF signal;

(~~2.2~~b) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(~~2.3~~c) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection function H(p), wherein the selection function is a linear combination of the data collision ratio R(i)~~s~~, p being from 1 through Q and denoting a pth partition sequence;

(~~2.4~~d) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

(~~2.5~~e) responsive to a control signal, selecting one of the first sequence and the second sequence to obtain a third sequence;

(~~2.6~~f) sorting R(i) of Np data collision ratios from ~~the~~a highest to ~~the~~a lowest to obtain T most interfered partitions, wherein ~~the~~ T is a predetermined value; and

(~~2.7~~g) rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected in step (~~2.1~~a) and the detected interference event occurs is within T most interfered partitions.

3. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus receiving a sequence of M channels, M and Np being positive integers, comprising the steps of: (~~3.1~~a) responsive to a RF signal, detecting an interference event within the RF signal;

(~~3.2~~b) measuring Np data collision ratios respectively corresponding to Np partitions, responsive

to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(~~3.3~~c) sorting R(i) of Np data collision ratios from ~~the~~a highest to ~~the~~a lowest to obtain T most interfered partitions, wherein ~~the~~ T is a predetermined value; and

(~~3.4~~d) rearranging the sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected in step (~~3.1~~a) and the detected interference event occurs is within T most interfered partitions.

4. (Previously amended) The method as depicted in claim 1, wherein the frequency hopping spread spectrum communication system includes frequency hopping spread spectrum multiple access (FHSSMA) communication systems.

5. (currently amended) The method as depicted in claim 1, wherein step (~~1.1~~a) further comprises the steps of:

(~~5.1~~e) counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

(~~5.2~~f) calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

6. (currently amended) The method as depicted in claim 1, wherein step (~~1.2~~b) is performed such that a regulation over band utilization in the frequency hopping spread spectrum communication system is met.

7. (currently amended) The method as depicted in claim 1, wherein step (~~1.2~~b) is performed such that a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system is met.

8. (original) The method as depicted in claim 7, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

9. (original) The method as depicted in claim 7, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

10. (currently amended) The method as depicted in claim 9, wherein ~~the~~a relative frequency of occurrence in step (~~1.2~~b) is only counted over the reserved time slot.

11. (currently amended) The method as depicted in claim 1, wherein between step (~~1.2~~b) and step (~~1.3~~c) further comprises the steps of:

(~~11.1~~h) negotiating with one of multiple peer devices to determine whether the peer device supports said Q partition sequences;

(~~11.2~~i) selectively crosschecking with other peer devices to determine whether other peer devices support the selected partition sequence; and

(~~11.3~~j) responsive to the results of step (~~11.1~~h) and (~~11.2~~i), selectively generating the control signal.

12. (original) The method as depicted in claim 11, further comprising the step of maintaining a directory in the host apparatus to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

13. (original) The method as depicted in claim 11, wherein the multiple peer devices include a first type of peer device external to the host apparatus and a second type of peer device integral with the host apparatus.

14. (currently amended) The method as depicted in claim 2, wherein step (~~2.2~~b) further comprises the steps of:

(~~14.1~~h) counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

(~~14.2~~i) calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

15. (currently amended) The method as depicted in claim 2, wherein step (~~2.3~~c) is performed such that a regulation over band utilization in the frequency hopping spread spectrum communication system is met.

16. (currently amended) The method as depicted in claim 2, wherein step (~~2.3~~c) is performed such that a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system is met.

17. (original) The method as depicted in claim 16, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

18. (original) The method as depicted in claim 16, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

19. (currently amended) The method as depicted in claim 18, wherein ~~the~~a relative frequency of occurrence in step (~~2.3~~c) is only counted over the reseed time slot.

20. (currently amended) The method as depicted in claim 2, wherein between step (~~2.3~~c) and step (~~2.4~~d) further comprises the steps of:

(~~20.1~~h) negotiating with one of multiple peer devices to determine whether the peer device supports said Q partition sequences;

(~~20.2~~i) selectively crosschecking with other peer devices to determine whether other devices support the selected partition sequence; and

(~~20.3~~j) responsive to the results in step (~~20.2~~h) and (~~20.3~~i), generating the control signal.

21. (original) The method as depicted in claim 20, further comprising the step of maintaining a directory in the host apparatus to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

22. (original) The method as depicted in claim 20, wherein the multiple peer devices include a first type of peer device external to the host apparatus and a second type of peer device integral

with the host apparatus.

23. (currently amended) The method as depicted in claim 2, wherein the predetermined manner in step (~~2.7~~g) includes the step of:

moving channels in the third sequence, corresponding to a partition within which the interference event is detected, toward end of the third sequence to obtain the hopping sequence.

24. (currently amended) The method as depicted in claim 2, wherein step (~~2.7~~g) is performed such that a regulation over band utilization in the frequency hopping spread spectrum communication system is met.

25. (currently amended) The method as depicted in claim 2, wherein step (~~2.7~~g) is performed such that a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system is met.

26. (original) The method as depicted in claim 25, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

27. (original) The method as depicted in claim 25, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

28. (currently amended) The method as depicted in claim 3, wherein step (~~3.2~~b) further comprises the steps of:

(~~28.1~~e) counting a number of interference events E and number of interference-free events En corresponding to each of Np partition; and
(~~28.2~~f) calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

29. (currently amended) The method as depicted in claim 3, wherein the predetermined manner in step (~~3.4~~d) includes the step of:
moving channels in ~~the~~a third sequence, corresponding to a partition within which the interference event is detected, toward end of the third sequence to obtain the hopping sequence.

30. (currently amended) The method as depicted in claim 3, wherein step (~~3.4~~d) is performed such that a regulation over band utilization in the frequency hopping spread spectrum communication system is met.

31. (currently amended) The method as depicted in claim 3, wherein step (~~3.4~~d) is performed such that a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system is met.

32. (original) The method as depicted in claim 31, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

33. (original) The method as depicted in claim 31, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

34. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising:

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection function H(p), wherein the selection function is a linear combination of the data collision ratio R(i)~~s~~, p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels; and

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence as the hopping sequence.

35. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising:

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF

signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection function H(p), wherein the selection function is a linear combination of the data collision ratio R(i)~~s~~, p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence to obtain a third sequence;

a sorting circuit for sorting R(i) of Np data collision ratios from ~~the~~a highest to ~~the~~a lowest to obtain T most interfered partitions, wherein ~~the~~ T is a predetermined value; and

a rearrangement circuit for rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit and the detected interference event occurs is within T most interfered partition.

36. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus receiving a sequence of M channels, M and Np being positive integers, comprising: a detector circuit, responsive to a RF signal, for detecting an interference event within the RF

signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a sorting circuit for sorting R(i) of Np data collision ratios from ~~the~~a highest to ~~the~~a lowest to obtain T most interfered partitions, wherein ~~the~~ T is a predetermined value; and

a rearrangement circuit for rearranging the sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit and the detected interference event occurs is within T most interfered partitions.

37. (previously presented) The apparatus as depicted in claim 34, wherein the frequency hopping spread spectrum communication system includes frequency hopping spread spectrum multiple access (FHSSMA) communication system.

38. (currently amended) The apparatus as depicted in claim 34, wherein the measurement circuit further comprises:

a counter for counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

a calculation circuit for calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

39. (currently amended) The apparatus as depicted in claim 34, wherein the partition sequence selected by the first selector is such that meets a regulation over band utilization in the frequency

hopping spread spectrum communication system.

40. (currently amended) The apparatus as depicted in claim 34, wherein partition sequence selected by the first selector is such that meets a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system.

41. (original) The apparatus as depicted in claim 40, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

42. (original) The apparatus as depicted in claim 40, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

43. (currently amended) The apparatus as depicted in claim 42, wherein ~~the~~a relative frequency of occurrence used by the first calculation circuit is only counted over the reserved time slot.

44. (original) The apparatus as depicted in claim 34, further comprises

a negotiating circuit for negotiating with one of multiple peer devices to determine whether the peer device supports said Q partition sequences;

a crosschecking circuit for selectively crosschecking with other peer devices to determine whether other peer devices support the selected partition sequence; and

a controller circuit, responsive to the results of negotiation by the negotiation circuit and the crosscheck by the crosschecking circuit, for generating the control signal.

45. (original) The apparatus as depicted in claim 44, further comprising a directory to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

46. (original) The apparatus as depicted in claim 44, wherein multiple peer devices include a first type of peer device external to the apparatus and a second type of peer device integral with the apparatus.

47. (currently amended) The apparatus as depicted in claim 35, wherein the measurement circuit further comprises:

a counter for counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

a calculation circuit for calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

48. (currently amended) The apparatus as depicted in claim 35, wherein the partition sequence selected by the first selector is such that meets a regulation over band utilization in the frequency hopping spread spectrum communication system.

49. (currently amended) The apparatus as depicted in claim 35, wherein partition sequence selected by the first selector is such that meets a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system.

50. (original) The apparatus as depicted in claim 49, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

51. (original) The apparatus as depicted in claim 49, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

52. (currently amended) The apparatus as depicted in claim 51, wherein ~~the~~a relative frequency of occurrence used by the first calculation circuit is only counted over the reserved time slot.

53. (original) The apparatus as depicted in claim 35, further comprising:

a negotiating circuit for negotiating with one of multiple peer devices to determine whether the peer device supports said Q partition sequences;

a crosschecking circuit for selectively crosschecking with other peer devices to determine whether other devices support the selected partition sequence; and

a controller circuit, responsive to the results of negotiation by the negotiation circuit and the crosscheck by the crosschecking circuit, for generating the control signal.

54. (original) The apparatus as depicted in claim 53, further comprising a directory to record peer devices supporting Q partition sequences and the hopping sequence currently selected for communicating with a peer device.

55. (original) The apparatus as depicted in claim 53, wherein multiple peer devices include a first type of peer device external to the apparatus and a second type of peer device integral with the

apparatus.

56. (currently amended) The apparatus as depicted in claim 35, wherein the predetermined manner performed by the rearrangement circuit includes the step of:

moving channels in the third sequence, corresponding to a partition within which the interference event is detected, toward end of the third sequence to obtain the hopping sequence.

57. (currently amended) The apparatus as depicted in claim 35, wherein the operation of the rearrangement circuit meets a regulation over band utilization in the frequency hopping spread spectrum communication system.

58. (currently amended) The apparatus as depicted in claim 35, wherein the operation of the rearrangement circuit meets a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system.

59. (original) The apparatus as depicted in claim 58, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

60. (original) The apparatus as depicted in claim 58, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

61. (currently amended) The apparatus as depicted in claim 36, wherein the measurement circuit further comprises:

a counter for counting a number of interference events E and number of interference-free events En corresponding to each of Np partitions; and

a second calculation circuit for calculating the data collision ratio for each of Np partitions as the ratio of En over En+E.

62. (currently amended) The apparatus as depicted in claim 36, wherein the predetermined manner performed by the rearrangement circuit includes step of: moving channels in ~~the~~a third sequence, corresponding to a partition within which the interference event is detected, toward end of the third sequence to obtain the hopping sequence.

63. (currently amended) The apparatus as depicted in claim 36, wherein the operation of the rearrangement circuit meets a regulation over band utilization in the frequency hopping spread spectrum communication system.

64. (currently amended) The apparatus as depicted in claim 36, wherein the operation of the rearrangement circuit meets a traffic requirement or a traffic characteristic in the frequency hopping spread spectrum communication system.

65. (original) The apparatus as depicted in claim 64, wherein said traffic characteristic includes traffic pattern of a synchronous type and an asynchronous type.

66. (original) The apparatus as depicted in claim 64, wherein said traffic requirement includes a reserved time slot for transmitting or receiving information.

67. (currently amended) The method as depicted in claim 1, wherein the selection function H(p) in step (1.2) is a summation of ~~(~~R(i)* relative frequency of occurrence of the ith partition in each of Q partition sequences~~)~~, p being from 1 through Q and denoting <u>the</u> pth partition sequence.

68. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partition to reduce probability of data collision in <u>a</u> frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(1) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(2) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a predetermined selection function H(p) to minimize the average probability of data collision, p being from 1 through Q and denoting <u>a</u> pth partition sequence;

(3) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels; and

(4) responsive to a control signal, selecting one of the first sequence and the second sequence as the hopping sequence.

69. (currently amended) The method as depicted in claim 2, wherein the selection function H(p) in step (~~2.3~~<u>c</u>) is a summation of ~~(~~R(i)* relative frequency of occurrence of the ith partition in each of Q partition sequences~~)~~, p being from 1 through Q and denoting <u>the</u> pth partition sequence.

70. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(1) responsive to a RF signal, detecting an interference event within the RF signal;

(2) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(3) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a predetermined selection function H(p) to minimize the average probability of data collision, p being from 1 through Q and denoting a pth partition sequence;

(4) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

(5) responsive to a control signal, selecting one of the first sequence and the second sequence to obtain a third sequence;

(6) sorting R(i) of Np data collision ratios from ~~the~~a highest to ~~the~~a lowest to obtain T most interfered partitions, wherein ~~the~~ T is a predetermined value; and

(7) rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected in step (~~2.~~1) and the detected interference event occurs is within T most interfered partitions.

71. (currently amended) The apparatus as depicted in claim 34, wherein the selection function H(p) is a summation of ~~(~~R(i)* relative frequency of occurrence of the ith partition in each of Q partition sequences~~)~~, p being from 1 through Q and denoting the pth partition sequence.

72. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising:

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to a RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a predetermined selection function H(p) to minimize the average probability of data collision, p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels; and

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence as the hopping sequence.

73. (currently amended) The apparatus as depicted in claim 35, wherein the selection fiction H(p) is a summation of ~~(~~R(i)* relative frequency of occurrence of the ith partition in each of Q

partition sequences~~)~~, p being from 1 through Q and denoting the pth partition sequence.

74. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising:

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a predetermined selection function H(p) to minimize the average probability of data collision, p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence to obtain a third sequence;

a sorting circuit for sorting R(i) of Np data collision ratios from ~~the~~a highest to a~~the~~ lowest to obtain T most interfered partitions, wherein ~~the~~ T is a predetermined value; and

a rearrangement circuit for rearranging the third sequence to obtain the hopping sequence in a

predetermined manner, as an interference event is detected by the detector circuit and the detected interference event occurs is within T most interfered partitions.

75. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels in a frequency hopping spread spectrum (FHSS) communication system, comprising the steps of:

(1) generating a first hopping sequence;

(2) dividing the M channels into Np partitions in a predetermined manner;

(3) generating a partition sequence; and

(4) mapping the first hopping sequence by the partition sequence to get the second hopping sequence, wherein the mapping translate an input channel number A in the first hopping sequence to an output channel number B within the corresponding partition in the partition sequence in a predetermined manner.

76. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(1) responsive to a RF signal, detecting an interference event within the RF signal;

(2) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(3) selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection value H(p), wherein the selection value is a summation of ~~(~~R(i)* number of occurrence of the ith partition in each of Q partition sequences~~)~~, p being from 1 through Q and denoting a pth partition sequence;

(4) mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

(5) responsive to a control signal, selecting one of the first sequence and the second sequence to obtain a third sequence;

(6) rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected in step (~~2.~~1).

77. (currently amended) A method for determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system having a host apparatus, the host apparatus receiving a sequence of M channels, M, Np and Q being positive integers, comprising the steps of:

(1) responsive to a RF signal, detecting an interference event within the RF signal;

(2) measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

(3) rearranging the sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected in step (~~3.~~1).

78. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus storing Q partition sequences and receiving a first sequence of M channels, M, Np and Q being positive integers, comprising:

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF signal;

a measurement circuit for meaning Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition;

a first selector for selecting a partition sequence from Q partition sequences, said partition sequence having a smallest value of a selection value H(p), wherein the selection value is a summation of ~~(~~R(i)* number of occurrence of the ith partition in each of Q partition sequences~~)~~, p being from 1 through Q and denoting a pth partition sequence;

a mapping circuit for mapping the first sequence of M channels to the selected partition sequence to produce a second sequence of M channels;

a second selector, responsive to a control signal, for selecting one of the first sequence and the second sequence to obtain a third sequence; and

a rearrangement circuit for rearranging the third sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit.

79. (currently amended) An apparatus, said apparatus determining a hopping sequence for [[~~hopingly~~]] selecting a channel from M channels divided into Np partitions to reduce probability

of data collision in a frequency hopping spread spectrum (FHSS) communication system, the apparatus receiving a sequence of M channels, M, Np and Q being positive integers, comprising:

a detector circuit, responsive to a RF signal, for detecting an interference event within the RF signal;

a measurement circuit for measuring Np data collision ratios respectively corresponding to Np partitions, responsive to the RF signal, said Np data collision ratios having value of R(i), i being from 1 through Np and denoting an ith partition; and

a rearrangement circuit for rearranging the sequence to obtain the hopping sequence in a predetermined manner, as an interference event is detected by the detector circuit.